

**Managing by Passion, Professionalism and Performance - the MBP<sup>3</sup>  
Model: an Alternative Management Framework Developed for the  
Instituto de Ciencias Terra-Mar (ICTM)**

by

**Alexandre C. Coelho**

B.A. Economics, Universidade Estadual de Campinas (Unicamp)

MBA Universidade de Sao Paulo (USP)

Submitted to the Sloan School of Management in partial fulfillment of the requirements for the  
degree of

**MASTER OF SCIENCE IN MANAGEMENT**

at the

**MASSACHUSETTS INSTITUTE OF TECHNOLOGY**

**JUNE 2007**

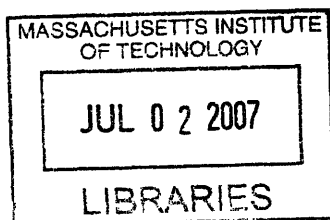
© 2007 Alexandre C. Coelho. All rights reserved.

The author hereby grants to MIT permission to reproduce and to distribute publicly paper and electronic  
copies of this thesis document in whole or in part in any medium now known or hereafter created.

Signature of Author: \_\_\_\_\_  
Sloan School of Management  
May 11, 2007

Certified by: \_\_\_\_\_  
John E. Van Maanen  
Erwin H. Schell Professor of Organizational Studies  
Thesis Supervisor

Accepted by: \_\_\_\_\_  
Stephen Sacca  
Program Director, Sloan Fellows Program in Innovation and Global Leadership



**ARCHIVES**

**Managing by Passion, Professionalism and Performance - the MBP<sup>3</sup>  
Model: an Alternative Management Framework Developed for the  
Instituto de Ciencias Terra-Mar (ICTM)**

by

**Alexandre Coelho**

B.A. Economics, Universidade Estadual de Campinas (Unicamp)

MBA Universidade de Sao Paulo (USP)

Submitted to MIT Sloan School of Management on May 11th, 2007 in partial fulfillment  
of the requirements for the Degree of Master of Science in Management

**ABSTRACT**

The objective of this thesis is to develop a new, tailor-made and innovative managerial framework for the Instituto de Ciencias Terra-Mar (ICTM). The ICTM is a multi-functional science and technology institute dedicated to delivering the basic and current scientific, technological and environmental education to children enrolled in the primary school system (K-7) in Brazil. The managerial model in this thesis takes into consideration ICTM uniqueness. This framework is an innovative management system - the MBP<sup>3</sup> Model: Managing by Passion, Professionalism and Performance.

Thesis Supervisor: John E. Van Maanen

Title: Erwin H. Schell Professor of Organizational Studies

## **Acknowledgements**

First and foremost I have to thank my family and friends.

Mikaella, my wife, was a blessing and always came first, regardless. She is the beauty behind the beast. She is my love. My inspiration.

My father Jose Coelho, my dear mother Suelena, Daniella, Fabiana, Marcella and Bug have been part of me and live in my heart and mind. My father has been an example. He is my mentor and role model. My mother gave me what I have of kindness, generosity and humanity. They taught me what could be taught: strong values, principles and dedication to a cause. The rest I learned the hard way.

I devote special thanks to Celso Nunes, Gustavo Roxo, Jose Berenguer and Evaristo Martins for their full support. Special thanks have to be forwarded to the staff of the Sloan Fellows program and to the many extraordinary professors and speakers that willingly came to make our experience even greater.

Mary Ann, Kai Wan and Tom, how can I thank you enough ? I repeat: “I was lucky”.

John VanMaanen has been my mentor and deserves most of the credit for making me deeply reflect on some of the fundamental issues of this thesis. Professor VanMaanen has also been an inspiration. I am deeply grateful to have studied under his mentoring. It has been an honor.

I am also indebted to all of those who have supported me over the years in my projects and in specially to my dear friend Eduardo Trindade. I am particularly grateful to my fellow colleagues here at Sloan who provided unlimited support and friendship and to the MIT community in general. I will miss this place a lot.

And although this acknowledgements expresses my unlimited gratitude to all of these wonderful people, I ultimately dedicate this thesis and my efforts to those children around the world who cannot have access to a dignified life and struggle each day to make it to the next.

# INDEX

<b>Acknowledgments .....</b>	<b>3</b>
<b>Index.....</b>	<b>4</b>
<b>Tables and Figures .....</b>	<b>6</b>
<b>Introduction .....</b>	<b>7</b>
<b>Chapter 1 – The Instituto de Ciencias Terra-Mar (ICTM): Objectives .....</b>	<b>10</b>
1.1 Corporate Structure .....	11
1.2 ICTM Management.....	11
The Board of Trustees .....	12
The Executive Board .....	12
The Scientific Board .....	13
The Fiscal Board .....	13
Corporate Responsibilities .....	14
Corporate Environmental Responsibilities .....	14
1.3 The Project .....	15
1.4 General Objectives .....	16
Specific Objectives of ICTM .....	18
<b>Chapter 2 – The ICTM: Operational Framework .....</b>	<b>18</b>
2.1 The Center of Science and Technology Dissemination and Ocean-Earth Interaction .....	
2.2 The Aquaculture Dissemination Center (ADC) .....	18
2.2.1 Objectives of the ADC .....	19
2.3 Partnerships .....	20
2.4 Educational Methods .....	21
2.5 The Facilities .....	22
The Facilities .....	23
Core Criteria and Categories used to Create the Facilities .....	24
Urban Master Plan .....	25
2.6 The Region .....	26
2.7 The Market for ICTM .....	28
2.8 Strategic Analysis and Competitive Advantages .....	29
2.9 Investment Considerations .....	30

<b>Chapter 3 – The MBP<sup>3</sup> Model .....</b>	<b>32</b>
3.1 Managing for a cause .....	32
3.2 Passion .....	33
3.2.1 Integrity .....	33
3.2.2 Core Values .....	34
3.2.3 A Passionate and Collaborative Leadership Culture .....	35
3.3 Professionalism .....	36
3.3.1 Competency & Capacity .....	37
3.3.2 Empowerment .....	38
3.3.3 Corporate Governance .....	39
Defining Governance .....	39
3.4 Performance .....	41
3.4.1 Result-driven Culture .....	41
Financially Sustainable .....	41
The Economic Model .....	42
3.4.2 Measurement System .....	42
Respecting the Client .....	43
Size Matters .....	44
The Founders are Present .....	46
3.4.3 Innovative Culture .....	47
<b>Chapter 4 – Conclusion .....</b>	<b>49</b>
Resources to Help .....	49
Barriers to Overcome .....	50
How to Reduce Barriers .....	51
<b>Bibliography .....</b>	<b>52</b>

**Tables & Figures**

Table 2-1: SWOT ANALYSIS - ICTM

Figure 4-1: Force Field Analysis

## **Introduction**

In the summer of 2002 I started working on a business plan to begin an educational institute dedicated to delivering sustainable scientific and technological knowledge to children in Brazil. The institute would meet the fundamental needs of society in the areas of social, economic, human and cultural development.

It wasn't until 2005 and after extensive development that the Instituto de Ciências Terra-Mar<sup>1</sup> (ICTM) was finally inaugurated as a private, non-for-profit institution.

Founded by scientists and entrepreneurs, the ICTM is a multi-functional science and technology institute dedicated to delivering the basic and current scientific, technological and environmental education to children enrolled in the primary school system (K-7) in Brazil. This institute serves as a hands-on educational launch-pad for basic science, alternative and sustainable clean energy systems, Ocean-Earth integration and coastal community development.

Since ICTM embraces specific missions and objectives and was constructed on an innovative platform, much of its economic, managerial and operational frameworks had to be constructed from scratch. Since this institution is in its nature unique, it is necessary to develop a tailor-made managerial framework to efficiently capture and sustain all of the institution's core competencies. To this extent, ICTM has been careful to develop specific sets of policies and competencies that frame our beliefs, mission, values and operational rationales. Although most of these elements had already been developed (economic and operational models), one is still incomplete – the managerial framework, which is the central focus of this research.

The objective of this thesis is to develop a new, tailor-made and innovative managerial framework specially for ICTM that takes into consideration all of its specificities. To accomplish this task, I reviewed ICTM's business and operational models and expose them to discussion within this thesis.

The managerial framework I propose is based on the concept of three fundamental elements: passion, professionalism and performance. I call this innovative management system the MBP<sup>3</sup> Model: Managing by Passion, Professionalism and Performance.

---

<sup>1</sup> Translation of Instituto de Ciencias terra-Mar is "Ocean-Earth Science Institute".

The assessment that led to the MBP<sup>3</sup> Model is the central point of the analysis conducted in Chapters 1 and 2. These first two chapters describe, in detail, the institute's overall mission from its economic rationale to the educational challenges the organization faces. It is important to understand that although the first and second chapters describe the core rationale and operational setting of the ICTM, they do not make reference to the MBP<sup>3</sup> model. The objective of these chapters is to note the pre-conditions and prior thinking that led to the creation of the MBP3. The third chapter explains the MBP<sup>3</sup> model. The fourth and last chapter presents my conclusions.



**“Walker, there is no path.  
The path is made by walking.”**

**Antonio Machado (Spanish Poet)**

*“It could not be clearer that we are now in an era where technical and scientific literacy are as critical as language literacy. We need to fix the K-12 pipeline that feeds higher education, and we need to support investments in students. Other countries have already figured this out and are building up their human capital.”*

Susan Hockfield (MIT President, September, 2006)

## **Chapter 1**

### **The Instituto de Ciencias Terra-Mar (ICTM): Objectives**

Education and culture are fundamental national assets. The road to a sustainable development consistent with Brazilian goals is to establish necessary standards for social and economic equality. By providing for the necessary conditions to reach high standards of teaching and *formation*<sup>2</sup> of society, nations provide the building-blocks to structurally qualify the fairness of their social layers.

The conventional teaching of science, through the linear presentation of knowledge, hides the rupture between the contemporary science and previous views about the world. ICTM recognizes the urgency of finding for efficient and modern methods of education that will lead to advances in science. But these methods must harmonize with larger cultural traditions whose preservation is essential for the development of future generations.

The growth and evolution of developed societies demand significant investments - both financial and human - in the formation of its citizens. This is particularly the case in the areas of science, technology, innovation, and the environment. Scientific, technological and ecological approaches to the causes and consequences of changes in our environment are vital and learning about them constitutes a requirement of a society that aims at sustainable development. A concentrated effort in the basic formation of citizens, through the sciences, is an indispensable and essential factor for the foundation of a developed society.

---

<sup>2</sup> “Formation” is an expression that means the way we raise our children as to all the lessons he or she receives from parents, mentors, friends, school, teachers and society. Formation is more than education or teaching. It is how we holistically raise children.

Governments and their programs, through their fundamental functions, have not yet been able to meet a growing demand in Brazil: Holistic education, one that comprises several areas of scientific knowledge (and others not yet included into the ICTM curricula) is needed. On the one hand, it is evident that the actions of governments are incomplete; on the other hand, the insufficiency of traditional education institutions to supply an educational system in harmony with society demands is obvious. The civil society, through initiatives such as the one proposed here, has a role in this mission. The creation of ICTM contributes to the fulfillment of part of the Brazilian demand for an innovative education that emphasizes scientific, environmental, and ecological knowledge.

The project here presented is in consonance with the general objectives of Agenda 21<sup>3</sup> and the Millennium Declaration and with the Brazilian strategic guidelines for fundamental education (Brazilian Policy of Environmental Education - Law 9.795/99 and State Policy of Environment - Law 9.509/97) + National Education Policy of the Education Ministry.

## **1.1 Corporate Structure**

Incorporated in 2006 by Alexandre Coelho and Jose Raimundo Coelho, ICTM is a private, non-profit legal entity organized under the provisions of civil law, with administrative and financial autonomy, headquartered in the city of São Paulo, State of Sao Paulo, Brazil.

## **1.2 ICTM Management**

ICTM is managed by a BOARD OF TRUSTEES, as a deliberative body; by an EXECUTIVE MANAGEMENT staff, as an executive body; by a FISCAL BOARD, as an internal control body; and by a SCIENTIFIC BOARD, acting as an inspection and advising body dedicated to oversee the academic-scientific works carried out within ICTM. Apart from the Founders, the Executive Management and the three Boards (Board of Trustees, Fiscal and Scientific Board), ICTM also includes Members, Other Founders, Maintainers ("Angels"), and a Commission of Experts ("Collaborators").

---

<sup>3</sup> That word wide association was based on the premises set forth in resolution 44/228 of the General Meeting dated December 22, 1989, adopted when the nations of the world called the Conference of the United Nations regarding the Environment and Development, and the acceptance of the need of adopting a balanced and integrated approach to issues related to education, environment and development.

Participating members can be admitted to ICTM in different manners:

Other Founders - Other individuals and/or legal entities that signed the incorporation document, and the Bylaws currently in use, as well as the those people who, despite not signing such documents, are the ones subsequently accepted by the Board of Trustees.

Maintainers - Individuals and/or legal entities that, within the conditions established by the Board of Trustees, make donations or periodic contributions for the maintenance of services and activities.

Maintainers (“Angels”) - Individuals who, by means of a decision of all members of the Board of Trustees are included due to their relevant support of ICTM.

### **The Board of Trustees**

The Board of Trustees of ICTM is composed of its founders and is responsible for the managerial, market-related, commercial, strategic, and academic competences, and will include representatives judiciously selected for the execution of those functions. The Board will be formed by professionals with proven experience in the areas of business administration, basic and environmental education, and in scientific and technology projects.

### **The Executive Board**

The Executive Board is composed of a Chairman, a Vice President, a Financial Administrative Officer, a Planning Officer, and a Technical-Scientific Officer. Its role is to comply with and bring to execution the decisions of the Board of Trustees. The members of the Executive Board are highly qualified professionals with proven experience in their areas of responsibility.

### **The Scientific Board**

The Scientific Board of ICTM is intended to be a consulting body. It is dedicated to the discussion and implementation of policies intended for the efficient teaching of the sciences. It will be composed of invited professionals - local and foreign - with experience in the areas of education, basic teaching,

basic science, oceanography, aquaculture, geography, economy, architecture, applied engineering, information technology, and geosciences, among others. This Board will act as an independent body for a democratic and permanent debate about the directions of science teaching and will have an important role in helping to gather, through comparison of the disciplines, and offer new views on nature.

The Scientific Board will seek out efficient and innovative educational tools that take into account cutting edge science. The Scientific Board is composed of seven principal counselors and three substitutes. There will be only one position in this board, Chairman. The others will be considered “scientific counselors.” The members of this Board will oversee the projects of a technical and scientific nature and will bring fresh opinions to ICTM concerning teaching and academic guidelines and goals.

### **Fiscal Board**

The Fiscal Board is composed of three principal members chosen by the Board of Trustees for a term of office of three years. The Board of Trustees has a period of two years, starting from the registration of the Incorporation Documentation of "ICTM," to present the names of the of the Fiscal Board. Once composed, the responsibilities of the Fiscal Board include:

I – Supervising ICTM’s managers, checking for the compliance with their legal and statutory obligations.

II – Rendering opinions about the itemized reports pertinent to the activities of "ICTM" and its economic, financial, and accounting situation and suggesting complementary information deemed necessary or useful to the deliberation of the Board of Trustees.

III – Rendering opinions about ICTM’s annual and multi-year budget and about the programs or projects related to the activities of the entity, from the perspective of maintaining financial-economical feasibility.

IV – Communicate to the Board of Trustees Board about the mistakes, potential frauds, and crimes it becomes aware of and suggesting necessary measures to correct them.

V – Examine and express opinions about the financial statements of ICTM.

### **Corporate Responsibility**

In the case of developing countries there is considerable concern on the part of funding agencies about corporate transparency and management methods. The business plan for ICTM was prepared with the purpose of maintaining strict compliance with those standards. Thus, sustainable values are built from responsible corporate actions. In addition, it is not part of ICTM's philosophy to be involved - directly or indirectly - in political, religious or ideological debates. The institute aims to respect diversity of all types, race, gender, religion, social and economic diversity as well as ethnic and cultural diversity.

### **Corporate Environmental Responsibility**

The Brazilian Federal Constitution grants the Federal Government, States, Distrito Federal, and Municipalities, the responsibility for environmental protection and preservation of the national flora and fauna. The power to enact laws and issue regulations regarding environmental protection is jointly held by the federal, state, and municipal governments. Municipalities are entitled to promulgate laws and regulations of local interests or those complementing federal and state regulations. The state agencies that inspect and control the pollution in the State of São Paulo are SMA – *Secretaria do Meio Ambiente do Estado de São Paulo* (São Paulo State Environment Secretariat) and *Companhia de Tecnologia de Saneamento Ambiental – CETESB* (Technology Company for Environmental Sanitation). In accordance with the laws of pollution control of the State of São Paulo, the installation, construction or expansion, as well as operation of polluting equipment will be preceded by a licensing on the part of CETESB.

ICTM agrees with the objectives of the Agenda 21 - Millennium Declaration and has committed to proactively promote the preservation of the environment, flora and fauna, regional habits and culture. ICTM is also committed to promote the effective use of raw materials and resources, to take into account the vital cycles of products, to harvest the economic and environmental benefits of using resources efficiently.

### 1.3 The Project

The objective of the founders of ICTM is to build an institute exclusively dedicated to the teaching and dissemination of sciences, to promote socially integrated technologies, to deliver environmental education for children of the primary schools (K-7)<sup>4</sup>.

ICTM is located in a seacoast area of the State of São Paulo and will educate approximately 170 students at a time, who will stay for three-day periods. Students will be involved, during their stays in educational activities directed to basic sciences, technology, ocean-related activities, botany, ecology, and environmental and sustainable actions. The facilities of ICTM will care for safety and will work as an advanced experimental laboratory of science and technology. The operations will be locally supported by sustainable, clean, alternative technologies.

Operating at full capacity, I estimate an annual maximum attendance of 37,000 students from the public and private educational systems. These students will come from more than 200 different schools. There is an emphasis to service low-income seaside populations through specific education and community programs. Within a context of feasibility of the financial subsidy program, students of the public teaching network, selected for the daily activities, will have access to the facilities of ICTM free of charge.

ICTM will also receive students from other countries, through a cultural exchange program. ICTM will also set up special programs for poor children (in orphanages), children with physical disabilities and children in medical treatment. This will be accomplished through coordinating agents and sponsors chosen by ICTM.

ICTM will use multi-disciplinary methods. Multimedia techniques will be used and integrated to the children's practical out-of-class activities. Experimentation is the backbone of the teaching methodology. It is intended to offer an alternative teaching methods based on applied scientific investigation methods. Innovation and creativity are ends to be fostered in ICTM's approach to science teaching. ICTM will expose students to subjects such as environmental development, oceanography, and ecology.

---

<sup>4</sup> For the public and private networks, as well as for teachers and seaside communities.

## **1.4 General Objectives**

The main objective of Instituto de Ciencias Terra-Mar is to promote the development of educational, technical-scientific, cultural and social education, as well as to organize programs, projects and actions exclusively dedicated to the teaching and spreading of sciences. In addition, ICTM promotes socially integrated technologies, environmental education and activities related to the Earth and Sea Sciences for children of the primary school system (K-7) of the public and private networks, their teachers and coastal communities. ICTM also promotes the preservation of environment and the rational use of natural resources, through programs, projects, plans and actions directed to sustainable development and to do so in such a way to allow the formation and consolidation of a socially fair, responsible and advanced community.

One of ICTM concerns is with the quality of the children's education, and with the education content in the basic sciences. ICTM has as a commitment not to simply complement the traditional classroom teaching but also to seed innovative abilities of scientific investigation and develop competences and knowledge.

### **Specific objectives of ICTM:**

I - Complement the traditional teaching of sciences through experimentation and practical application.

II - Promote the popularization of sciences and promote the curiosity and interest of children in the sciences.

III - Promote the use of healthy technologies and systems integration and do so in an interdisciplinary manner.

IV - Prepare children for future competencies and new professions.

V - Provide education directed to sustainable development through the stimulation of scientific understanding, and reinforce competences to assure that the scientific development is reactive to emerging socioeconomic needs.



VI - Act as a platform to spread scientific and technological advances promoted by Brazilian and international agents - translated into a language accessible to students, teachers and members of the local community.

VII - Promote practical applications and teaching of Environmental Education.

VIII - Qualify students to understand and use scientific and technological research at regional, national, and global levels.

IX – Use interdisciplinary teaching approaches that take advantage of the specific content of each discipline.

X - Minimize the depletion of non-renewable natural resources and expand the understanding and use of recycling routines.

XI - Stimulate the rational and efficient use of renewable sources through the spreading of technologies widely known as beneficiary for the environment.

XII - Disseminate studies on coast deforestation, reforestation, weather changes, rational use of water and aquatic resources, demographic trends and other issues related the preservation of our oceans.

XIII - Stimulate healthy consumption behavior and sustainable production standards.

## **Chapter 2**

### **The ICTM: Operating Framework**

ICTM is an organization intended for practical results – and whenever possible, measurable results. The Institute will interact with governmental institutions, private sector organizations and multilateral and international development agencies. ICTM is an educational venture supported by laws and market practices in its mission of promoting social equality and sustainable growth. ICTM will be financially autonomous. A large part of its resources will come from the services rendered to private school students. Students from public schools<sup>5</sup> will have access to ICTM free of charge once the necessary budget conditions are met.

#### **2.1 The Center of Science and Technology Dissemination and Ocean-Earth Interaction**

The Center of Science and Technology Dissemination and Ocean-Earth Interaction is the primary facility at ICTM. It will provide teaching activities and general management administration.

Students will spend most of their time at ICTM engaged in experimental learning activities (theory-practice-experimentation). There will be five laboratory rooms, exhibition laboratories (four permanent and one itinerant), an auditorium, a film museum, and library. The other activities will be coordinated according to the exhibitions in laboratories or conducted outdoors. On a smaller scale, extra-curricula activities will be specifically supplied by the faculty in different sessions. There will also be a space to receive itinerant exhibitions and showcases provided for partners of ICTM (such as universities, research centers, museums, and foundations).

---

<sup>5</sup> Children from the Brazilian public school system cannot afford to pay for the daily tuition of the ICTM. Therefore, the objective (business model) is to render these services for free to these students. If they cannot afford it, they should still have access to it (“universal access”). ICTM will make sure this policy is enforced through specific financing and through its business model and its bylaws.

## **2.2 The Aquaculture Dissemination Center (ADC)**

*The loss of biological diversity can reduce the resistance of ecosystems to weather changes and damages stemming from air pollution. The atmospheric changes may have important consequences on forests, biological diversity and the fresh water, as well as on sea ecosystems, and economic activities...*

(Agenda 21 Chapter 9.19 - 4)

ICTM will also have an Aquaculture Dissemination Center (ADC). Its mission is to promote sustainable use of land and sea resources and rational practices with regard to marine resources. Aquaculture is an efficient way to mitigate the excessive exploration of coastal areas. In the context of a sustainable development in Brazil, aquaculture plays an essential and necessary role. Besides promoting healthy food, aquaculture helps in the preservation of the marine environment and generates income for seashore communities. If well executed, it can be an indispensable tool for a truly sustainable socioeconomic model.

Focused on the dissemination of the aquaculture knowledge, ICTM, through ADC, will conduct its activities by means of a holistic methods and pay attention to economic factors (market), social factors (regional development), and environmental factors (effects on biodiversity).

ADC will make use of an oceanographic sailing vessel called the "Projeto Tatui." This vessel will help to educate children in the land-sea interfaces and aquaculture. The focus of activities conducted on the vessel include: Biological Oceanography, Physical Oceanography, Chemical Oceanography, and Geological Oceanography.

### **2.2.1. Objectives of the ADC**

- a. To provide an exhibition platform for effective aquaculture techniques. The target audience includes: students, teachers, researchers, and members of the local community.
- b. Stimulate a wide-spread interest in aquaculture as an option for regional socioeconomic development and national strategic interest.
- c. Provide as a small-scale laboratory for practical and experimental applications.
- d. Develop partnerships with research institutions.

## **Targets to be achieved in ADC:**

### Income and Employment

ADC will disseminate simple aquaculture techniques and family-level cultivation. The aim is to encourage riverside communities/fishermen to engage in aquaculture practices.

### Environmental Issues (Mata Atlantica Forest and Ocean)

ADC wishes to promote activities not harmful to the oceans and coastal areas. These regions are important to keep the native population in their natural habitat and promote environment preservation.

### Reduce urbanization:

ADC helps to reduce predatory and illegal real estate exploitation in coastal areas. It seeks also to lessen the rural exodus of local people into urban areas. One way to do so is to raise the quality of life for seaside populations and reduce premature school departure.

### Teaching

Expand horizons and stimulate the desire and ability to learn through experimentation.

### Strategic

Stimulate the well-known Brazilian economic aquaculture potential. This requires dissemination of knowledge and practice.

## **2.3 Partnerships**

Brazil has significantly advanced in the areas of science and environmental education. With that in mind, partnerships aiming at complementing the competences of ICTM are to be strongly encouraged. ICTM will establish partnerships with public and private agencies. It is worth mentioning that a significant number of agreements have been already established in the past few years. Thus, there are different types of partnerships (local and international).

**Teaching Partnerships** – To promote cooperation with sponsors in the areas of teaching, learning materials, educational systems, specific pedagogic applications, among others.

**Diffusion** – To promote scientific and technological dissemination, in partnership with universities, research centers, visitation centers, museums, professional schools, business schools, and community centers. Also, to disseminate research and recent discoveries in a language that students can understand. There will be lectures at ICTM by scientists, researchers, experts, teachers as well as entrepreneurs. These “visiting lectures” will help ICTM to continually update and disseminate scientific and technology knowledge. Another important function of ICTM is to make public the discoveries and advances of Brazilian researchers.

**Private Partnerships** - Partnerships with private companies will be important to ICTM in both financing and the dissemination of knowledge. The focus will be on sustainable development. The goal is to provide a platform for the dissemination of positive and practical results of private investments in research, sustainability, and ecological innovation.

**Financing Partnerships** - Development partnerships are crucial for the building and maintenance of the activities of ICTM. These partnerships are crucial for providing subsidies to the less advantaged students coming from public schools.

**Culture Exchange Programs** - ICTM will engage in cultural exchanges with students, teachers, and researchers from other countries.

## **2.4 Educational Methods**

The conventional teaching of science, through the linear presentation of knowledge, hides the differences between the contemporary science and previous views of the world. It is the ICTM's mission to recognize the need to find efficient and modern methods of education that lead to ongoing advances in science.

ICTM founders believe that learning is more efficient and lasting when it is related to children's direct experiences. Experimentation will be the central focus at ICTM. The senses are sharpened through experimentation as a way toward understanding. Teaching will be focused on the foundations of science, technology and sustainable development in various domains. Teaching activities will involve simulation; audio-visual materials and direct experimentation.

The laboratory modules will be distributed across five areas of study:

- Energy Matrixes
- Biology / Botany / Marine Biology / Ocean-related (Aquatic Complex + Aquaculture)
- Physics/ Chemistry / Astronomy
- Environment / Ecology / Architecture
- Mathematics / Information Technology

Educational materials to be employed, ICTM include:

- Bibliographical Material - material developed by ICTM;
- Practical lessons in laboratories;
- Audiovisual activities (Documentaries + films + lessons in video);
- Visits to laboratories;
- Creative activities - development of inventions;
- Guided activities in classroom (experimentation);
- Outdoor activities and guided exploration (direct experiences with the sea and forests);
- Lectures from experts (partners, universities, science institutes and private firm research);
- Teaching through Information Technology (LAB) – computer assisted study.

Two complementary sets of materials (“packages”) are part of the teaching materials. The purpose of the packages is to promote continuous learning for the students (before, during and after their stay at ICTM).

- (i) PRE-ICTM Package – The PRE-ICTM Package presents the learning materials sent to students prior to their ICTM experiences.
- (ii) POST-ICTM Package – A set of materials prepared with the objective of creating continuity of the activities at ICTM and later learning. These are to be sent to both teachers and students. The teachers will work with the materials at their respective schools after the students stay at ICTM. This package also provides feedback and measurement tools that will help ICTM better deliver its programs. It is important to point out that ICTM will also discuss with students and teachers possible

improvements for ICTM. The institute realizes that it must focus on its “customers”, and their needs.

Other materials will be developed in addition to those mentioned. Various reports will be prepared for different audiences: students, teachers, school managers and parents.

## **2. 5 ICTM's Facilities**

Brazil has a tradition of exploring new concepts in architecture and urbanization. ICTM wishes to respect this tradition and contribute to its development.

### **The Facilities**

The Main Complex will encompass ICTM's principal activities. In it, teaching and experimentation activities will be carried out within eight large laboratories. In addition to educational activities, the Main Complex will support administrative activities. There is also a multi-function auditorium for (audio-visual activities and lectures) and documentation center for sciences, technology and the environment. Green-model houses (“ecologic houses”) will also be built to demonstrate sustainable technologies.

As noted the ICTM complex will also hold an Aquaculture Dissemination Center, a building dedicated to the spreading of practices and technologies related to the ocean (aquaculture) and to the diffusion of knowledge directed to the preservation and conservation of the marine and costal environment. This will be a “hands-on” aquarium. Other facilities include dormitories, a botanical complex, workshops, and a pier.

### **Core criteria and categories used to create the physical facilities**

Taken as a whole, the facilities represent a large integrated laboratory, whose purposes are to encourage: (i) scientific and applied technological education; (ii) sustainable development in the environment; (iii) integration with local communities; (iv) convenience and operational feasibility; (v) and the efficient use of the buildings.

## **Urban Master Plan**

Based on those concepts, ICTM will make use of design, construction, and operation methodologies, guided by seven fundamental principles. These form a sustainable design and urban construction master plan that follows specific guidelines. This master plan is partially inspired by LEED (Leadership in Energy & Environmental Design) - a certification guide created by the U.S. Green Building Council to regulate and unify the knowledge in the areas of building and sustainable design. The master plan of ICTM also includes elements related to Brazilian realities. The seven principles are the following:

- A. Integration with the environment and local community.
- B. Sustainable sites.
- C. Efficient use of water resources.
- D. Energy and Atmosphere.
- E. Materials and raw material.
- F. Internal ambient quality.
- G. Processes and Sustainable Suppliers.

### **A. Integration with environment and local community**

**Pre-requisites:** To try to achieve harmony and sustainable integration with the environment and local community.

- Design that is in harmony with the local landscapes.
- Design that preserves the natural cycles of the terrestrial and marine life.

### **B. Sustainable Sites**

**Pre-requisites:** Erosion and Sediments Control.

- Wise Selection of the “site”.
- Density and Development.
- Brownfield Development.
- Develop transportation means with low index of pollutant emission.
- To value natural bushes.
- Heat Island Effect.
- Pollution Reduction.



### **C. Efficient use of the water resources**

**Pre-requisites:** Self sufficiency and rational utilization of the water.

- Efficient use of the hydro resources.
- Innovative and sustainable routines for residues.
- Low rate of water utilization.

### **D. Energy and atmosphere**

- Modest energy use.
- System of sustainable cooling/heating.
- Renewable and efficient use of energy.
- No gas (CO<sup>2</sup>) emission.
- Systems of measurement and control.
- Ability to generate renewable energy.
- Periodic evaluation of energy systems.

### **E. Materials and raw material**

- Innovative waste management system.
- Reuse of materials.
- Recycle contents.
- Use of local materials.
- Material and Wood certified.
- Use of recycled/recyclable material in the construction.

### **F. Internal Ambient Quality**

- Excellent air quality.
- System of air quality measurement.
- Tobacco prohibited.
- Efficient and rational systems of ventilation (active and passive).
- Use of materials with low level of toxicity (ink, sealants, finishing, woods, etc.).
- Continuous assessment of the toxicity of the materials.
- Thermal comfort (temperature/moistness).
- Rational and efficient use of the natural light.

- Internal spaces provide adequate outdoor views and good radiance and avoid glare. Adequate illumination and views to the exterior environment promotes an effective learning process.

#### **G. Processes and Sustainable Suppliers**

- Suppliers must support sustainable processes.
- Privilege these suppliers whose objectives and processes are aligned with ICTM objectives.

### **2.6 The Region – Sao Paulo, Brazil, Mata Atlantica (Atlantic Forest)**

ICTM is located within the Mata Atlantic (Atlantic Forest) on the coast of the State of Sao Paulo. The *Mata Atlantica* is considered one of the most endangered and ecologically important eco-regions in the world. Due primarily to the clearing of forests for coffee plantations and logging for hardwoods, there is now only 7% of the original area that remains undisturbed. Most of their area is isolated. The massive destruction of this region has been described as "one of the biological tragedies of this century". Preventing more loss of the Atlantic rainforest is a priority for international conservation efforts.

#### **Description of Region:**

**Annual Population Growth (1991-2000):** urban 2.0% and rural 0.8%.

**Education:** Prevalence of public schools and a growth of 80% in the number of enrollments between 1978-1998.

**Main problems:** Shortage of water in metropolitan areas; unordered occupation of preservation areas; degradation of plant covering; energy; transportation; and sea pollution.

**Environmental Protection Areas (EPA's):** Regulates 42% of lands with the 22 existing EPA offices.

**Non-renewable sources:** An increase of 4.2% per year between 1993 and 2000 in the consumption of petroleum by-products in transportation (representing 27% of the energy use of the state).

**Consumption:** Consumers in the region have little knowledge of environmental and sustainable problems.

**Atmosphere protection (sources):** Energy and transportation sectors generate 95% of the pollution.

**Home waste:** Generation of waste estimated at 20,000 tons/day of which 31% is appropriately disposed of, 23% disposed of in controlled conditions, and 46% disposed of in non-adequate ways.

**Contaminated areas:** 238 assuredly contaminated; 280 considered possibly contaminated, and 89 places in remediation process (in 2002).

According to a report prepared by the Environment Agency of the State of São Paulo (*Agenda 21 in São Paulo 1992-2002*), the forest covering the State was originally composed of two main biomass: *Mata Atlântica* forest (81%) and *Cerrados*<sup>6</sup> (about 12%). Both have gone through serious devastation. Occupation of coastal areas, followed by occupation of inland areas, begun in the second half of the 19th century. But during the 20th century, deforestation intensified. In little more than a century, 89.5% (15,776,848 ha) of the forest areas were totally destroyed. Presently, plant covering in the State is only 7% of the original coverage of *Mata Atlântica* forest and 1% of Cerrado. As noted, Cerrado and *Mata Atlântica* forest areas were rated as one of the 25 “Hot Spots” (among the most threatened ecosystems) of the planet, bringing national and international attention to their preservation.

The *Mata Atlântica* forest, at the time of discovery of Brazil, covered 15% of the Brazilian territory. Currently, the area holds the largest industrial concentration in Brazil. It is also the most important urban center of the country. It contains three types of forest formations, each with distinct characteristics. *Floresta Ombrófila Densa*<sup>7</sup> (known as Mata Atlântica or Mata da Encosta), *Floresta Estacional Semidecidual*<sup>8</sup> (Inner Vegetation) and *Floresta Ombrófila Mista*<sup>9</sup> (Araucaria Forest - Pine wood). Those formations hold a significant portion of the Brazilian biodiversity.

---

<sup>6</sup> A type of tree savanna covering found in the central part of Brazil, called *Centroeste*.

<sup>7</sup> Dense Tropical Humid Forest

<sup>8</sup> Seasonal Deciduous Forest

<sup>9</sup> Mixed Subtropical Forest

The same Report indicates that the coastal region of the state of São Paulo encompasses an area of 21,00km<sup>2</sup> distributed among several municipalities. The coast line has an approximate extension of 700 km; more than 430 km consist of 292 sandy beaches. This region is composed of 15 municipal districts that hold about 5.5% of the population of the State. Some of these municipalities have a growth rate of up to 6.6% per year, well above the average of the rest of the State (2.2%). Consequently, the socioeconomic pressure in this area has led to an accelerated, unplanned and noxious urbanization process along with the swift and intense degradation of natural resources. These process threaten the economic sustainability, the environment, and quality of life for the human population in and adjacent to the area. Socioeconomic and environmental conflicts are growing worse with every passing year.

#### Coastal Municipalities – An ICTM priority

The State of São Paulo, as noted, has 15 relevant coastal municipalities. The total population of those municipal districts is 1,676,369 with 283,658 students enrolled in the elementary school network. There are, 249,717 students in public schools and 33,941 in private institutions. The total number of elementary schools in that area is 753 of which 554 are public and 199 are private.

A goal of ICTM to prioritize its services to those students of Brazilian coastal areas, (from both public and private networks). The services to those public school costal students will be offered free of charge. ICTM will be teaching science to the children of those areas. ICTM is convinced that these children are essential agents for the dissemination of integrated and sustainable development in the region.

## **2.7 The Market for ICTM**

### **Potential and Effective Market - Premises**

The distance between schools and ICTM has been considered strategically. ICTM believes that the most demand will derive from the regions next to the ICTM (a 200 km radius). This is mainly the City and State of Sao Paulo. Some demand is however expected from other states such as Rio de Janeiro, Minas Gerais, Parana, Santa Catarina, Rio Grande do Sul, Espirito Santo, Goias e Distrito Federal.

The city of São Paulo has a population of 10,4 million inhabitants, with 1,70 million children (K-7) registered in primary education. Approximately 1,400,000 students are distributed into 1,398 public schools (state, municipal and federal) and 968 private schools.

A specific research study conducted for ICTM concluded that 6.32% of the K-7 students of the private system belong to class AA; 11.0% belong to class A; 21.54% to class B; 26.11% to class C; and 35.03% belong to class D. This research indicates that approximately 61% of the students in the city of São Paulo would be excluded from the services of ICTM if their parents have to pay. The rate would be even higher, perhaps 70-80%, in less developed cities.

#### The Market of the Interior of the State of São Paulo

The interior of the State of São Paulo accounts for almost 15,0 million inhabitants. Most of this is distributed throughout 34 cities. The ICTM objective is to reach the cities with populations above 200,000. The institute estimates that close to 2,15 million K-7 children are registered in basic education in this area. The largest cities are Campinas, Guarulhos, São Jose dos Campos, Sorocaba, Ribeirão Preto, Santos, São Jose do Rio Preto and Piracicaba.

#### Other States

The other surrounding states are as Minas Gerais, Rio de Janeiro, Espírito Santo, Paraná, Santa Catarina, Rio Grande do Sul and Goiás. These states account for approximately 16,0 million students in the K-7 level. The target-public for ICTM in these states are concentrated in main capitals and in cities with population above 300,000 inhabitants. Many of these cities are within acceptable distances to ICTM.

### **2.8 Strategic analysis and competitive advantages**

A SWOT table is presented below and lists the main strategic and competitive dimensions of ICTM. A SWOT analysis is a useful framework in value based management and strategy formulation to outline Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T) for a particular organization. Considering that ICTM is a performance-drive organization, it has to utilize strategic analysis to its business model analysis.

This methodology generates important strategic alternatives from a situation analysis point of view. This framework was originally developed by Edmund P. Learned, C. Roland Christiansen, Kenneth Andrews, and William D. Guth in *Business Policy*, text and Cases in 1969. In the SWOT analysis modeling, Strengths and Weaknesses are internal value creating (or destroying) factors. Opportunities and Threats are external factors. Ultimately, an organization's strengths are its capabilities and resources. The SWOT analysis for ICTM provides fundamental strategic thinking to the business. It also provides information that is essential in aligning the institute's capabilities and resources to the environment in which it operates.

**TABLE 2 - 1** **SWOT ANALYSIS - ICTM**

STRENGTHS	LIMITATIONS
<ul style="list-style-type: none"> <li>- Professional and experienced management</li> <li>- Teaching focus</li> <li>- Innovative and sustainable facilities</li> <li>- Education system focused on innovation</li> <li>- Social responsibility</li> <li>- Strong partnerships</li> </ul>	<ul style="list-style-type: none"> <li>- As a start-up, time required for reach full development</li> <li>- Assimilation of the concept by schools, teachers and target audience</li> <li>- Need of financial support for beginning of operations</li> </ul>
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>- Expand strengths and responsibilities</li> <li>- Expansion for other educational areas</li> <li>- Expand recycling methods</li> <li>- Support of social, economic and environmental initiatives in the region</li> </ul>	<ul style="list-style-type: none"> <li>- New "players" may not understand the concept of specific education in the sciences, technology and sustainable development.</li> </ul>

## 2.9 Investment Considerations

The investment timeline projects two phases for the development of ICTM. The first step is project development. This phase involves items such as the incorporation of the company, the contracting of feasibility studies, the preparation of development work, market studies, development of architecture and engineering work, and the execution of the project itself. This phase - which represents 3.93% of total expenses - will require US 1,20 Million for an appropriate implementation.

The second phase is Project Execution and corresponds to 96.07% of total investment, amounting to US 28,80 Million. In this phase, the costs related to the execution of the work, construction, land, acquisition, acquisition of equipment and vehicles, hiring of employees, training, development, and production of furniture, and preparation of learning materials, marketing and dedicated research (among others), will be carried out mostly through direct grants.

## Chapter 3

### Management Framework: Managing by Passion, Professionalism and Performance - the MBP<sup>3</sup> Model

*“What is most important is that management should realize that it must consider the impact of every business policy and business action upon society. It has to consider whether the action is likely to promote the public good, to advance the basic benefits of our society, to contribute to its stability, strength, and harmony”.*

(Peter Druker, 1995)

#### 3.1 Managing for a cause

Most organizations try hard to find a specific and adequate management framework that best suits the firm's overall and ever-changing objectives. ICTM is doing it the other way around. The Institute's objective is to develop an innovative “built-to-suit” management framework to properly manage a non-for-profit science and technology educational center for K-7 children in Brazil. The managerial framework is thus to built to sustain the institute. What follows are core principles that will serve as values, competencies and produce a result-driven organization.

My approach to developing a management framework was to first provide an understanding of the institute's primary functions and goals. Since the ICTM is a unique institute and has a specific philosophical and operational mission, it is necessary to create an innovative, tailor-made, management approach. My analysis has led me to conclude that ICTM should make use of management practices that I call Passion, Professionalism and Performance. It is my “MBP<sup>3</sup> Model”.



### **3.2 Passion**

Passion is the first and most important element of the institute's "driving-force" and it derives from people. It is, not an institutional value, but one that is individual. Passion is the spirit that drives the institute. Although passion can be observed in many places and in many different circumstances, my concern in this analysis is the type of passion that determines one's career choices. Passion is what drives individuals to make strong life-changing sacrifices. The "passionate professional" is the one that has a deep belief in his or her mission in life. There are psychological aspects to passion which are beyond a rational understanding yet passion is nonetheless correlated with mission, values and will.

Passion is essential to a successful nonprofit. According to Snyder, Dowd and Houghton (1994): "A leader's enthusiasm for a vision is contagious and often is responsible for arousing interest in and convincing others of the rightness of the vision, thereby obtaining commitment...you cannot command commitment, you can only inspire it". They further note the role of passion in leadership: "Leaders cannot ignite the flames of passion in their followers if they themselves do not express enthusiasm for the compelling vision...it is this excitement that must be harnessed to the leader's everyday attitudes and actions, inspiring others throughout the organization by giving encouragement and support to employees..." (p. 110-111).

#### **3.2.1 Integrity**

Integrity plays a critical role at ICTM. Integrity has to come from the bottom and the top of the corporation. It has to be embedded throughout all layers and all activities of the organization. Selection must be based on integrity which is part of the job descriptions and evaluation processes of the institute. The secret to a successful social-purpose business is to provide an unparalleled positive human experience for "clients" of the organization (the children, teachers and community). Integrity also reflects how employees treat one another. Organizations with integrity are concerned with making sure their employees are satisfied and happy.

ICTM's mission is to become one of the Brazil's best employers and make employees proud of their activities and of their organization. This is fundamental to the success of its mission and embraces the concept of mutual trust. It is part of ICTM's approach to demonstrate pride and trust in each and every

member of the staff and strive to promote the best environment for employees. Only if this is true will they be able to achieve happiness and professional growth.

*“At the heart of a nonprofit organization status lays a valuable economic and social asset, trust. Nonprofit status can create a sense of trust that is essential to achieving certain organizational objectives. Trust is largely a function of the nondistribution constraint, which limits the opportunity for someone to make excess profits at the expense of the needy or the organization’s supporters”.*

(Oberfield & Gregory, 1992, p.117)

The seriousness of purpose in maintaining high standards of respect and integrity among employees must be part of the mission of ICTM. By promoting a high level of commitment and seriousness to meeting the needs of employees, ICTM will be able to achieve its goals.

Ethics and integrity walk side-by-side. One depends on the other. As Johnson and Philips (2003) note that: “if ethics are those codes by which we should conduct our business, then integrity is the firm adherence to those codes. The better we define an ethical code to fit the everyday situations we all face, the easier it will be for people to formerly adhere to that code. They also state that “if people are going to risk expressing controversial viewpoints, especially when challenging the ethical nature of decisions made by their own organization, it helps if they have a set of guidelines on which to base their opinions” (p. 214-219).

Lennik & Kiel (2005), note that “integrity is the hallmark of the morally intelligent person. When we act with integrity, we harmonize our behavior to conform to universal human principles. We do what we know is right; we act in line with our principles and beliefs. If we lack integrity, by definition, we lack moral intelligence.”

### **3.2.2 Values**

Values are beliefs. They reflect an attitude and hence are connected to behavior. A value is an evaluation as well. Sets of values form prescriptions (i.e., statements of what not to do and what to do)

that guide our daily life. According to Oden (1997), core values are organization's essential and enduring tenets.

Values also affect how we interpret and perceive things and events around us. Yet decades of research on values have shown little correlation to behavior" (Lennik & Kiel , 2005). Yet, they also note that the universal principles we believe are key to leadership effectiveness – integrity, responsibility, compassion, and forgiveness.

The organizations whose values reflect these principles are the most likely to be successful over the long term. Companies that embed these principles into their cultures will succeed because they will keep more than their fair share of the world's most talented employees. These are the principles that resonate strongly with employees, so that they want to stay with the firm and are inspired to give their best efforts to the organization. But if integrity, responsibility, compassion, and forgiveness are absent from the life of an organization, there is dissonance between what the organization stands for and its employees' hopes and beliefs. If employees' values do not line up with the company's code of conduct, it is unlikely that they will give the company their best.

Values play an important role in today's corporate management. In Tichey and McGill (2003), CEO Jeffrey Immelt expresses his opinion on values: "All of globalization is the marriage between understanding local customers and never running away from who you are and what you stand for on a global basis. Our values are global. Our rules and our culture are global" (p. 117).

Snyder, Dowd and Houghton (1994) also describe their understanding of values and their relation to leadership. They note that values and beliefs are critical dimensions in leadership effectiveness because they serve as the basis for direction and action. According to Philip Selznick (1957), "The formation of an institution is marked by the making of value commitments (and) the institutional leader is primarily an expert in the promotion and protection of values (page 19).

### **3.2.3 A Passionate and Collaborative Leadership Culture**

*"Achieving grand vision always requires a burst of energy. Motivation and inspiration energize people, not by pushing them in the right direction as control mechanisms do but by satisfying basic human needs for achievement, a sense of belonging, recognition, self-esteem, a feeling of control over one's life, and the ability to live up to one's ideals. Such feeling touch us deeply and elicit a powerful response".*

John P. Kotter (2001)

An effective leader must understand that as a rule his or her decisions and beliefs are not always obvious to others in the organization. Indeed, effective leaders must constantly invest considerable time with their staff to make themselves understood.

Adequate communication across all layers of the organization is fundamental. As Kotter (2001) puts it: "Trying to get people to comprehend a vision of an alternative future is a communications challenge of a different sort of transmitting a short-term plan" (p. 65). Communication creates collaboration which allows for alignment and long-lasting credibility.

Oden (1997) notes that at the heart of an innovative culture lies the vision of the leader. The leader must be able to inspire others with the vision so that others want to say yes to it. At ICTM the role of the leader is crucial to the organization's long-term success and must lead by example.

Collaboration and accountability work together for positive results. The spirit of collaboration at ICTM is essential to obtain practical results. It also serves to generate a "mind-set" that embodies key values. I understand that the lack of collaboration is one of the elements that produce indifference. As Frydman *et al* (2000) say: "if organizational learning is to thrive, we must bring about more collaboration. We must have more true partnerships. There must be a more equal sharing of accountability and trust between the theory-makers and the theory-testers, more opportunities genuine dialogue" (p.122).

It is crucial to provide for frequent and frank feedback from staff. Employees must have the freedom and desire to speak out. They must have open channels of communication to allow them to speak across all levels of the organization. Innovation, for example, is a competency that comes from confidence and empowerment. The organization's leader has to make sure that open communication is valued.

### 3.3 Professionalism

#### 3.3.1 Competency & Capacity (C&C)

Competency and capacity - “C&C” - refers to what is necessary to accomplish a complex job. It is the set of skills, experience and knowledge that individual employees possess. They are essential to success.

During my second year as a Corporate Officer at Banco BBA Creditanstalt<sup>10</sup> (one of Brazil’s major investment banks), Mr. Fernao Bracher<sup>11</sup>, its CEO, had the patience to describe to me what he thought was one of the bank’s secrets to success. He felt that mixing young “high-potentials” employees with experienced skilled senior managers was critical. In addition, Mr. Bracher felt that he preferred to work with professionals who he considered more qualified than himself. In his words: *“I always prefer to work with those that are better than I”*. I have remembered those words.

There are other lessons I learned from Mr. Bracher. One of them was to make sure that those one hires are competent and are provided with the proper set of tools and a supportive environment. But, perhaps, most important, by speaking directly to me, he was demonstrating trust and sending an important message: “I think you are highly qualified”.

Highly-skilled and competent employees are crucial to ICTM’s organizational success. The single most visible factor in ICTM’s management team must be its managerial quality. Because ICTM is a knowledge-based organization and focused on scientific education, its staff is accordingly expected to meet high standards in the provision of educational services. In the case of ICTM, C&C plays a decisive role. ICTM is a knowledge-oriented organization and can only move forward successfully if C&C is in place. Empowerment and C&C walk hand-in-hand and are responsible for managerial efficiency.

According to Oden (1997), high-level managers have an important role in formulating and encouraging an “innovative culture” for their company. This is crucial for ICTM. High-level managers set direction and get people in the organization aligned. Drawing on their own insights and ideas from others, they must develop a sense of what is possible, articulate their vision, and work with people to

---

<sup>10</sup> Banco BBA Creditanstalt S.A. was founded in 1988 and became Brazil’s major investment bank during the 90’s, it is known for its innovative client-oriented operational model. In 2001, Banco BBA Creditanstalt was acquired by Banco Itaú to form the wholesale bank Banco Itaú BBA.

<sup>11</sup> Mr. Fernao Bracher was Banco BBA Creditanstalts’ founder and President. He was also Brazil’s former Central Banks’ President (1983-1987) and principal negotiator of the Brazilian external debt with the Paris Club.

align them to the vision. Furthermore, they must select, train, and develop people capable of realizing the vision. In essence, they must create their vision of the company's culture in light of their vision.

### **3.3.2 Empowerment**

Empowerment is also a major ingredient of a successful organization. ICTM will benefit by properly selecting and training its employees (managers, teachers and staff) to levels where they feel comfortable and confident. Members of ICTM must also exercise the ability to make crucial decisions on their own. This takes time and effort.

Johnson and Redmond (1998) define empowerment as achieving goals; it means getting everyone involved in making a success of the business. Involving people is no longer an option, it is a requirement for success...The bottom line is that organizations must empower people to achieve positive improvements in performance. They further note that empowerment is also about values. It is about treating people in a good way. It involves seeing people as whole human beings with their own hopes and fears, their own aspirations and their own lives outside the workplace. Empowered people are treated with respect. They are prepared to work wholehearted with others in a worthwhile enterprise. This approach to empowerment is inspiring.

According to Snyder, Dowd and Houghton (1994) "the best definition for empowerment is the authority to plan and do the work you are capable of doing...at the heart of empowerment is the conviction that people are good...to empower others, leaders must simply believe that over time most people will exercise power in pursuit of a vision and be guided by good values..." (p. 189).

Empowering employees through an institutional policy is difficult. According to Dew (1997), no one can order people in the workplace to be empowered. The best you can do is to create a system that reinforces empowerment. Empowerment is not achieved by pep talks or interpersonal relations gimmicks. Either the system in which people work fosters empowerment or it fosters endullment. Dew adds to the definition of empowerment by noting that in an empowered setting, people are engaged in making the decisions that influence the quality of their work life. (page 3).

Sagie and Koslowsky (2000) note that the concept of employee participation has been widely accepted in the theoretical and empirical literature. The term employee participation actually has diverse meaning. It can imply that workers participate on the company board “worker participation in management” (Strauss, 1990); hold shares or stocks of the firm “employee ownership” (Zwerdling, 1984) or get revenues “gainsharing” (Beck, 1992). Although all of these terms refer to “empowerment” in a specific manner, the one to be addressed in this research is related to employee decision-making within a corporate culture. As Sagie and Koslowsky (2000) has noted participation implies involvement and this is more than simply taking part in decision making: It denotes a program that combines employee participation in work-related decision making (PDM<sup>12</sup>) with some type of incentive for the participants (e.g. monetary incentives). Although Sagie and Koslowsky (2000) suggest “monetary incentives”, I believe that ICTM employees must develop their “incentives” through passion for their responsibilities and mission of the institute. My belief is that incentives at ICTM are directly correlated to personal and organizational beliefs. This phenomena is related to the employee’s sense of meaning and alignment with the organization’s missions.

Employee participation through empowerment has been increasing in organizations. Research conducted by Lawler, Mohrman and Ledford (1989) and Lawler, Mohrman and Ledford and Ledford (1992) have addressed this increase in employee participation. According to Sagie and Koslowsky (2000) the major motives for using teams was to increase market responsiveness by getting more input from employee levels. It is, therefore, noteworthy that these research demonstrates that empowerment and organizational efficiency are highly correlated and that organizations are shifting in this direction.

The question of empowerment is also important to the self-esteem of all employees. The more decision rights they “own”, the more they will feel committed to the goals and results of the institute. The greater the confidence and empowerment of employees, the more responsibility they exercise.

### **3.3.3 Corporate Governance**

According to Oden (1997) “corporate culture” is an organization’s basic values, beliefs, and assumptions about what the organization is all about, how its members should behave, and how it defines itself in relation to its external environment. ICTM must align its corporate culture and

---

<sup>12</sup> Wagner and Gooding (1987) have defined PDM as an organizational process by which management shares influence on decision making between hierarchical superiors and subordinates. PDM stands for Participative Decision Making.

corporate governance. ICTM must foster a culture of proper corporate management that reflects on good governance. A few important elements make good corporate governance possible. Elements such as ethical standards, structured governance systems, transparency, competency and strong core institutional values make for a sound corporate governance system.

*“Good governance is...the single most important factor in eradicating poverty and promoting development”.*  
(Kofi Annan, 1988)

Governments alone are not responsible for social equity. All members of society must participate. Social entrepreneurs have been playing major roles in meeting social and economic welfare goals for some time. The social entrepreneur has to lead social and entrepreneurship in what ICTM wishes to represent. Bornstein (2004) notes that while concerns have mounted about global problems, so has the conviction that governments are failing to solve them. Decades of failed development policies and discouraging wars on poverty, drugs and crime have led many to conclude that governments are not the most effective vehicles for social change. And, they are certainly not the sole legitimate vehicles.

## **Defining Governance**

Braithwaite & Levi's (1998) define governance in the following way “Governance is the delivery of political goods to citizens: the better the quality of the delivery and the greater the quantity of the political goods being delivered, the higher the level of governance. Delivery and performance are approximately synonymous in this context” (p. 79).

In a similar vein, Rotenberg (2004) understands that “good governance is a precious commodity in the nation-states of the developing world” (p. 34). His approach focuses on public governance, what he calls “the developing world”. He states: “How to improve the governance capabilities and governance effectiveness of the developing world is thus a daunting and urgent challenge” (p. 35). I agree with Rotenberg and acknowledge that the lack of proper governance produces social inequalities “...given that three-fifths of all of the people in the world live in the developing world, given the fact that the vast majority of those billions of people endure or suffer from being mal-governed, given the reality that nation-state failure in considerable part is a function of mal-governance, and further, given the



likelihood that poor governance provides grievances and fertile ground for the nurturing of terror and terrorists, how to strengthen the quality of governance in the developing world is a timely, critical, and worthy endeavor” (p.35). ICTM wants to fill a gap. It sees the need for services that national policies and the Brazilian governments are unable to deliver.

In terms of the governance of ICTM, the intent is to take full advantage of Board members. From my experience, not many organizations actually make use of their boards. ICTM wishes to avoid underutilizing Board members. As Kidd and Fernandez-Araoz (2007) point out: “Many corporations are failing to obtain full value from their boards. This lost opportunity occurs not only in dysfunctional organizations but also in companies that perform well and are market leaders. While many companies boards unfortunately have weak or even incompetent members, even companies with highly qualified directors often can fail to fully tap the skills and experiences of those individuals” (p. 57).

### **3.4 Performance**

#### **3.4.1 Result-driven Culture**

*The social leader has to be above all a pragmatic leader. “One of our most common mistakes is to make the mission statement into a kind of hero sandwich of good intentions. It has to be simple and clear.*

Peter Druker (1990)

Organization’s ICTM wants to be result-driven and impact-oriented. It is an essential part of the philosophy and mission. My belief is that performance is key to a successful organization, whether for profit or nonprofit. Results<sup>13</sup> must be continuously measured and evaluated by members of the institution.

Those who have joined ICTM at the board level are performance-driven individuals. Most of them have founded major scientific and technological institutions. They are what I call entrepreneur-academics. They have built their careers on determination, competency and persistence.

---

<sup>13</sup> Pragmatism in meeting objectives is part of ICTM’s operational mindset. The leaders of ICTM have to make sure that all of its members are fully equipped and comfortable to make decisions through empowerment. All members of the ICTM, which includes board members (Board of Trustees and scientific), collaborators, staff, directors, managers and teachers must have precise sets of objectives and goals.

*Performance in non-profit organizations is critical: "Strategy converts a non-profit institution's mission and objectives into performance. An effective non-profit institution also needs strategies to improve all the time and to innovate. Performance in the non-profit must be planned. And this starts out with the mission. Non-profits fail to perform unless they start out with their mission. For the mission defines what results are in this particular non-profit institution."*

Peter Druker (1990)

### **Financially Sustainable**

The ICTM is designed to be financially independent and economically sustainable. Financial independence through the generation of its own revenues is an essential element of the operational philosophy. ICTM is also designed to be free from governmental dependence. Although it takes advantage of its tax exemption and will depend on initial grants and subsidies during the pre-operational phase, ICTM is set to be resource independent at an early stage. Long term survival<sup>14</sup> and independence resides in producing its own financial resources and paying fully for its provision of all services.

Although there are hundreds of legitimate (and outstanding) initiatives in the social sector in Brazil (and elsewhere), generally only those that perform well are economically sustainable. Only through economic independence can such organization survive in the face of political and governmental discontinuities.

### **The Economic Model of ICTM**

Because ICTM fears dependence on public resources, its economic model is based on the creation of its own revenues. ICTM charges daily fees from the students of the private school system. These fees (services) account for 80% of ICTM's costs. Part of these revenues will cover the ongoing costs of the students from public schools who cannot afford to attend the institute without assistance. The

---

<sup>14</sup> ICTM also foresees the necessity to produce an economic surplus to be reinvested in new features, innovative activities and in new social ventures.

remaining 20% of ICTM's financial needs will be generated through grants and donations from non-public entities (multilateral agencies, NGOs, foundations, and other private sponsors).

### **3.4.2 Measurement Systems**

According to Hax & Wilde (2001), metrics are not a narrow instrument of management control, but rather they constitute a progressive vehicle for communication and shared commitment. Metrics produce congruency in the plethora of organizational and member actions.

It is difficult to discover efficient measurement systems. Nevertheless, ICTM must develop some and make practical use of them. Sawhill & Williamson (2001) note that "for a mission-driven non-profit, measuring "success" is ... difficult. The more abstract the mission is, the more difficult it is to develop meaningful measures of outcome or mission impact."

Hax and Wilde (2001) reinforce the importance of measurement in, aligning strategy and action. In their view, "metrics is a critical element to measure the success of the business. Metrics are required to define performance, delineate accountability, monitor progress, and establish the feedback mechanisms necessary to change the course of action whenever this is needed".

They also note that "...brilliant strategies are often dependent upon the creative and inspiring genius of those who are in charge of their formulation. Brilliant execution, however, has to be based on objective, factual, and often detailed metrics that permit the appropriate follow-up of the strategic tasks throughout the whole organization". ICTM's measurement systems and practices will be based on simplicity and objectivity. The institute will, whenever possible, avoid subjective evaluations. However, since success is defined in terms of creating social value, this is difficult to measure and resistant to conversion into monetary terms. Social benefits created by ICTM may be intangible, widely spread, or have long latency period. Thus, determining the organization's degree of success, its relative efficiency and effectiveness will be a complicated task (Rosabeth & Summers, 1987). But, credible and efficient measurement system is essential to ICTM. As noted by Rotenberg (1998), in order to be credible, however, any rating scheme has to be as objective as possible.

*"None of the organizations we interviewed had solved the general question of measuring success in nonprofits, nor had any of them discovered the nonprofit analog to "profit" for a private sector enterprise." They go on to assert that "the*

*nonprofit groups that reported the most success in developing performance measures had all developed specific, actionable, and, most critical, measurable goals to bridge the gap between their lofty missions and their near-term operating objectives. Rather than spending inordinate effort in measuring mission, these groups have concentrated on identifying and then achieving goals that will move them in the direction of mission success – tacitly abandoning a direct measure of success in favor of a cheaper, faster, more useful surrogate of organizational performance.”*

*Sawhill & Williamson, (2001)*

One common mistake that many non-profits institutions face is the lack of a clear and objective mission. At ICTM, the management team must have their objectives well defined<sup>15</sup>. The must also identify milestones in reaching their objectives.

*A non-profit mission is essentially its reason for being. It encompasses ambitions and visionary goals. They go on to suggest: “that clarity is not about mission, but about what we call intended impact and theory of change”...Intended impact and theory of change provide a bridge between a nonprofit’s mission and its programmatic activities. Intended impact is a statement or series of statement about what the organization is trying to achieve and will hold itself accountable for within some manageable period of time. It identifies both the benefits the organizations seek to provide and the beneficiaries.”*

*Colby, Stone and Carter (2001)*

Measurement tools should be simple and straightforward. Adopting a culture of performance measurement serves three important roles in the institution. First, it provides a quantitative set of conclusions about performances. It offers numbers and measures to work on. Second, it provides accountability within all layers of the organization. It also provides reflection on conduct and on objectives. Measurement can spark debates and raise question about what ICTM is doing. The organization must have the willingness to self-correct. And, third, a straightforward, result-driven measurement culture provides the organization with a way to promote equitable alignment within the organization.

---

<sup>15</sup> One possible route for becoming successful is stimulating straightforward and effective communication, developing “clarity”, promoting empowerment and pragmatic goals. The goals must be crystal clear to all members. Clarity is an important component to successful managerial measurement.

## Respecting the client

A measurement culture accreted to with well-trained personal who provide dedicated services is an unbeatable combination. Although ICTM has different types of clients, from parents to schools (and school boards), to communities and children, the product (viewed as a service) is developed for children and teachers. In terms of numbers, 90% of the clients are children<sup>16</sup> and teachers and it is on them that the measurement systems must focus.

ICTM will seek to avoid a common problem observed in conventional primary schools: Not fully respecting children as individuals. Respect is key to long-term and sustainable success. Children play a fundamental role in setting the standards and demands.

Measurement systems are always beneficial for the organization. An important aspect of measuring results refers to results of the learning process. Measurement tools and constant feedback permits continuous learning. This implies that ICTM, according to Wyner, Wilson & Frydman (2000), must engage in “organizational learning”. Organizational learning is “the process of forming and applying collective knowledge to problems and needs. It is learning that helps the organization continually improve, achieve goals, and attain new possibilities and capacities. It is learning that taps into employee aspiration, fueling commitment and creating the energy to change” (Page 77).

*“The whole metrics system has to be designed with the purpose of learning in mind...We should embed in the metrics system appropriate feedback mechanisms that will educate us on which aspects of our strategic actions are working and which need to be modified... metrics alone do not convey the intensity of the challenge they impose on the business organization. This materializes when we attach to the metric a specific target and a deadline for its implicit execution”*

*Hax & Wilde (2001)*

## Size Matters

Another aspect related to the measurement system is the size of the institution in terms of employees, the number of projects undertaken, and the number of managerial levels. The smaller the organization,

---

<sup>16</sup> ICTM understands the importance to fully comprehend the children in all of its complexity. This means that the child is the center of our attention.

the higher the probability of communication and information transfer. Smaller organizations are generally fast and agile. They therefore meet their goals more efficiently. Since the ICTM is an organization composed of 71 employees at its peak capacity, bureaucratic rigidities should be avoided.

### **The Founders are present**

One characteristic that is fundamental is for the founders of the institute to remain in close contact with the everyday operations of the organization. The founders must have direct daily contact with all layers of the institution. It is crucial to have non-founding members of the institution be mentored by the founders. ICTM is different from large scale nonprofit such as the Ford Foundation or the Red Cross. They have thousands of employees. These are nonprofits without “owners” but with professional managers. ICTM has founders as participants, which should promote efficiency and foster agility.

### **Compliance and Transparency**

Just as public companies are subject to constant surveillance from the Securities Exchange Commission (SEC) and from other regulatory agencies, so too are nonprofits. ICTM will be accountable to independent agencies and the general public. In Brazil there are no specific reporting statements or agencies for entities such as ICTM. However, nonprofit foundations must report and comply to governmental agencies.

In terms of transparency, and according to Sagie and Koslowsky (2000), the positive contribution of having a participation process to role and task clarity has been demonstrated in previous research (Jackson, 1983; Smith & Brannik, 1990). Several studies showed that the mediating effect of work clarity on the PDM-work outcomes relationship holds. It is critical during periods of organizational change (Sagie, Elizur & Koslowsky, 1995; Sagie and Koslowsky, 1994). By clarifying one’s roles, goals, and relevant environmental elements, a sense of meaning can be achieved. A sense of meaning implies a fit between a person’s values, beliefs, and needs and his or her work role and goals (Thomas and Velthouse, 1990).

ICTM will pay special attention to transparency and accountability in regard to financial, strategic planning and investment practices. Accountability must be embraced by all layers of the institution. Transparency is a major element of ICTM's governance principles. Transparency will be fostered as a core element of the institute and will be central to operations and planning.

### **3.4.3 Innovation Culture**

“...for innovation to thrive, for it to be continuous and consistent, the organizational culture must encourage and nurture it”.

Oden (1997)

Establishing an innovative culture is an ongoing process. To achieve long-lasting success, ICTM has to promote a culture of learning and avoid arrogance. Being opened-minded is, however, easy to say, but hard to do. According to Bornstein (2004), it takes creative individuals with fixed determination and indomitable will to propel the innovation that society needs to tackle its toughest problems. He shows that important social change frequently begins with a single entrepreneur; an obsessive individual who sees a problem and envisions a new solution, takes the initiative to act on that vision, gathers resources and builds an organization to market that vision. The entrepreneur must provide the energy and sustained focus to overcome inevitable resistance, and who – decade after decade keeps improving, strengthening and broadening the vision until what was once a marginal idea has become a new norm.

Oden (1997) has undertaken significant research on the subject of innovative culture. He notes that a growing body of research indicates that individual innovators and entrepreneurs must have an organization that supports, encourages, and fosters innovation if the company is to succeed in the long run. In short, for an innovative company to succeed, it must have an innovative culture. An innovative culture includes anything and everything within the total internal environment of an organization that affects new product development. He argues that an appropriate culture enables innovations to occur faster and better. A culture is an organization's reality; culture shapes all that goes on within the organization.

A culture of innovation is only possible through people who have passionate initiatives and believe in freedom of thought<sup>17</sup>. Thus, passionate initiative and creative capacity are fundamental characteristics of innovative organizations and must be supported by its leaders.

Beirne (2006) points out important considerations to the understanding of culture, empowerment and innovation. In his assessment, the resulting mantra is that excellent companies thrive because they engage in restructuring while at the same time enthusing people to be co-operative and creative. According to (Kanter, 1984) “change masters” simultaneously humanize structures and unfreeze the status quo, decentralizing work arrangements while creating a culture that is conducive to the change. Beirne (2006) also notes the value of culture; “...culture carries a very specific meaning. It is the product of management decision-making, an expression of the way that senior figures define the character and purpose of an organization”. According to Deal and Kennedy (1999), culture is the higher cause that glues the various communities of organizational life together.

Oden (1997) notes that innovation is the product of knowledge and empowerment (the combination of autonomy and responsibility). The culture in which innovation is most likely to flourish is one in which employees are encouraged to accumulate knowledge continually. It is a culture in which open communication is the norm, and employees have easy and complete access to information. It is an environment in which all employees are empowered to act on their accumulated wisdom in order to generate continuous innovation.

*“We further realize that the innovation process must be supported by a complex set of social institutions. Although markets have a great deal to do with innovation, innovation is not purely a market-driven phenomenon. Innovating economies require an interconnected set of market and nonmarket institutions to make the innovation process work effectively, and for this reason, governments need an innovation strategy if they wish to foster highly innovative economic systems.”*

Sachs & McArthur (2002)

These characteristics must be embodied in both ICTM leaders and the staff. Fresh ideas have to flow easily and freely throughout the organization. Everyone must listen carefully and give proper attention to everyone else. In essence, a culture of innovation is a social accomplishment.

---

<sup>17</sup> Freedom of thought aligned with individual respect are fundamental conditions for encouraging individuals to take initiative and develop new ideas.

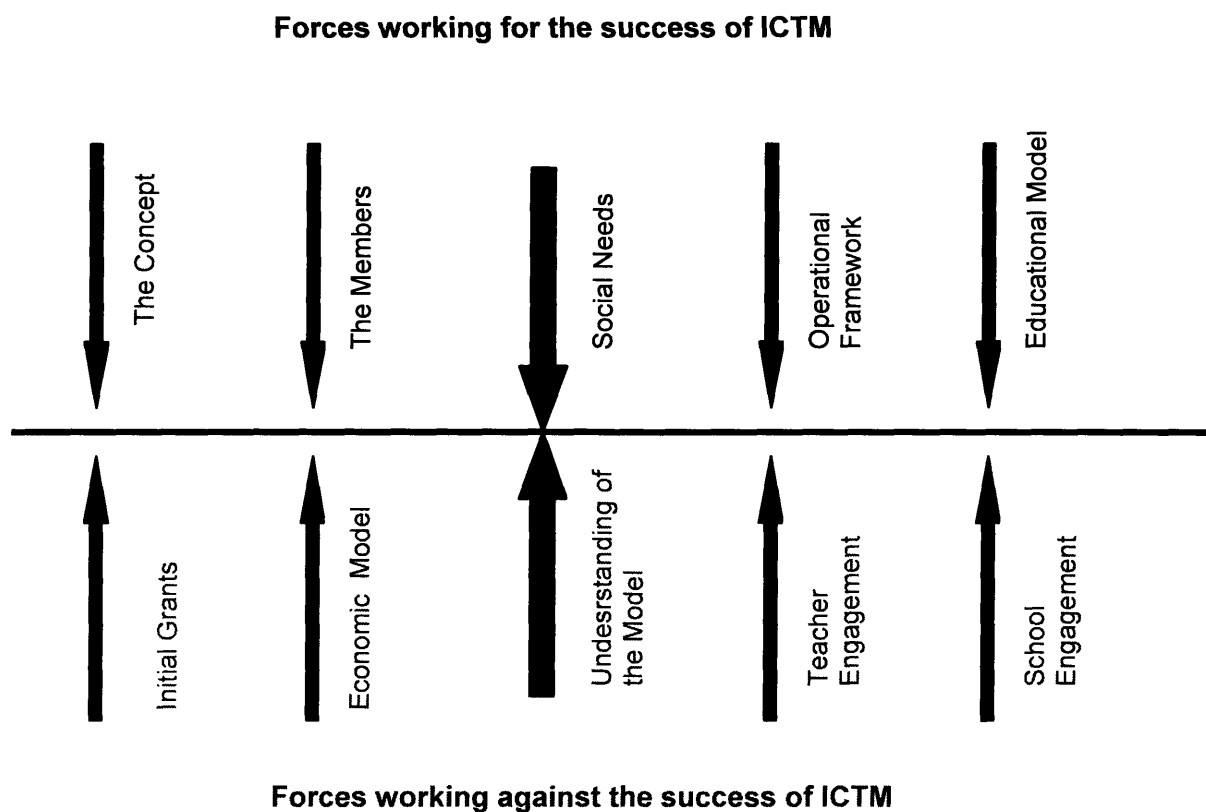


## Chapter 4

### Conclusion

A useful way to conclude is to overlay a force field analysis on the ICTM initiative. Figure 4-1 displays these forces.

Figure 4-1: Force Field Analysis



#### Resources to help

The need for science education in Brazil that ICTM meets is clear. The resources are already in place: the concept, the ideas, the social need, the educational model, the operational framework, the qualified and dedicated members, partners and collaborators.

## **Barriers to overcome**

Making sure stakeholders thoroughly understand ICTM innovative educational, operational and business proposition is crucial. This is a new proposition, It may not be easy, for example, to take primary and elementary school teachers out of their comfort zones.

ICTM's stakeholders are its clients and partners. ICTM's clients are children, teachers, school administrators (and boards), parents and local communities. ICTM's partners are public, private and nonprofit organizations that are connected to ICTM in different ways and by various levels of intensity. Since the educational proposition is unique and has no comparative organization in Brazil - or to my knowledge elsewhere -, it is necessary to build broad awareness of the institution and its mission. Yet, from my experience in conversations with stakeholders, once they understand ICTM, its mission and operational framework, they are supportive. Nonetheless, an important obstacle to overcome is getting the mission, objectives and educational aims fully understood by all stakeholders.

Another factor of potential threat is the economic model itself. Although I think it is solid and will reach existing markets, it is still to be tested. Only through experience will the operational, financial and economic model be proven sound.

## **How to reduce barriers**

The premise of a force field analysis is that the user attempts to reduce barriers rather than adding to the pressure for change. In this context, the most important actions to now undertake to make ICTM a success are the following.

First, hire a number of highly enthusiastic, passionate, motivated and well-trained teachers. The teachers are core elements of transformation and the single most important contact with children. The teachers are the ultimate service providers. They represent the organization, its mission and culture. The teachers are the conduit element between knowledge and sustainable practice.

Second, develop a strong board. A strong board is needed, especially in the early phases of the organizational development.

Third, partners must be located, engaged and signed on to guarantee financial viability. Thus far, operational partners have been located but ICTM has not yet started the quest for grants and financial resources.

Fourth, is execution. Execution and implementation are potential barriers. ICTM's educational concept as well as its economic and operational framework have never been tested before. ICTM is a unique organization. Perhaps, the best way to execute is to do so in parts and gradually. The experience of the founders and board members in project management and in running scientific institutions, suggest working with realistic tangible goals. The business plan pays attention to this potential barrier. ICTM will take one step at a time and conclude each phase in accordance with its capabilities and capacity.

## Bibliography

Agenda 21 – The Millenium Declaration. United Nations.

Amar, A. (2002). *Managing Knowledge Workers: Unleashing Innovation and Productivity*. Westport, Connecticut and London: Quorum Books.

Armstrong, M. (2006). *Performance Management: Key Strategies and Practical Guidelines*. London and Philadelphia: Kogan Page.

Beck, D. (1992) *Implementing a gainsharing plan; what companies need to know*. Compensation and Benefits Review, 24 pp21-33.

Beirne, M. (2006). *Empowerment and Innovation: Managers, Principles and Reflective Practice*. Cheltenham, UK: Edward Elgar.

Bornstein, (2004) *Restless People, How to Change the World – Social Entrepreneurs and the Power of New Ideas*, pp. 2-3, Oxford University Press, NY.

Braithwaite, V. and Levi, M. (1998), Harvard Kennedy School's WPF Report 39.

Bruns, Jr., W. (1992). *Performance Measurement, Evaluation, and Incentives*. Boston, Massachusetts: Harvard Business School Press.

Deal, T. & A. Kennedy (1999). *The New Corporate Cultures: revitalizing, the workplace after downsizing, mergers and reengineering*. Cambridge, Massachusetts: Perseus.

Dew, J. (1997) *Empowerment and democracy in the workplace: applying adult education theory and practice for cultivating empowerment*, Quorum Books.

Druker, P. (1990) *Managing the nonprofit Organization – Principles and Practice*, HarperCollins Publishers.

Druker, P. (1995) *The Practice of Management*, HarperCollins Business. pp. 340-342.

Evers, F., Rush, J. & Berdrow, I. (1998). *The bases of Competence: Skills for Lifelong Learning and Employability*. San Francisco: Jossey-Bass Publishers.

Flynn, J.R. (1990) *Searching for Justice: The discovery of IQ gains over time*, American Psychologist, 54, 5-20.

Frydman, B., Wilson, I. and Wyer, J. (2000) *The Power of Collaborative Leadership - Lessons for the Learning Organization*, Butterworth-Heinemann.

Garelli, S. (2006). *Top Class competitors: How nations, firms, and individuals succeed in the new world of competitiveness*. John Wiley & Sons, Ltd.

Griliches, Z. (1977) Estimating the returns to schooling: Some econometric Problems, *Econometrica*, 45(1), pp. 1-22.

Hax, A. and Wilde, D. (2001) *The Delta Project – discovering new sources of profitability in a networked economy* - Chapter 9, pp. 175-191, Palgrave Publishers Ltd.

Hess, E., & Cameron, K. (2006). *Leading with Values: Positivity, Virtue, and High Performance*. Cambridge: University Press.

Hesselbein, F., Goldsmith, M. & Somerville, I. (2002). *Leading for Innovation and Organization for Results*. A Wiley Company: Jossey-Bass.

Hultman, K. & Gellermann, B. (2002). *Balancing Individual and Organizational Values: Walking the Tightrope to Success*. A Wiley Company: Jossey-Bass.

Jackson, S. (1983) *Participation in decision making as a strategy for reducing job-related strain*. *Journal of Applied Psychology*, 68, pp. 3-19.

Johnson, L and Philips, B. (2003) *Absolute honesty: building a corporate culture that values straight talk and rewards integrity*, AMACOM, American Management Association.

Johnson, R. and Redmond, D. (1998) *The art of empowerment – the profit and pain of employee involvement*, Financial Times Management, Pitman Publishing (pp. XV).

Jones, S. (1996). *Developing a learning culture: Empowering people to deliver quality, innovation and long-term success*. The McGraw-Hill Training Series.

Kanter, R. M. (1894). *The Change Masters: corporate entrepreneurs at work*. London: Routledge.

Kotter, J. (2001) *What leaders Really Do*, Harvard Business Review, Harvard Business School Publishing, (R0111F), December, pp. 3-11.

Lawer, E. E., III, Ledford, G. E., Jr., & Mohrman, S. A. (1989). *Employee involvement in America: A study of contemporary practice*. Houston, TX: American Productivity and Quality Center.

Lawer, E. E., III, Mohrman, S. A., & Ledford, G. E., Jr. (1995). *Creating high performance organizations: Practices and results of employee involvement and total quality management in Fortune 1000 companies*. San Francisco: Jossey-Bass.

Learned, E., Christiansen, R., Andrews, K. and Guth, W. (1969) *Business Policy* (Homewood, IL: Irwin).

Leavitt, H. (2005). *Top Down: Why Hierarchies are here to stay and how to manage them more effectively*. Boston, Massachusetts: Harvard Business School Press.

Lennik, D. & Kiel, F. (2005) *Moral Intelligence, Enhancing Business Performance & Leadership Success*, Pearson Education, Inc., pp. 156-163. Wharton School Publishing.

O'Neil, M. (2002) *Nonprofit Nation, a New look at the Third America*, Jose-Bass, Chapter 4, pp.73.

Oberfield, A. and Gregory, D. (1992) *Note on Starting a Nonprofit Venture*, Harvard Business School Publishing (Cases), #9-391-096, September, 1992, pp.10.

Oden, H. (1997). *Managing Corporate Culture, Innovation, and Entrepreneurship*. Westport, Connecticut and London: Quorum Books.

Radin, B. (2006). *Challenging the Performance Movement: Accountability, Complexity and Democratic Values*. Washington, DC: Georgetown University Press.

Rosabeth, A. and Summers, D. (1987) *Doing Well While Doing Good: Dilemmas of Performance Measurement in Nonprofit Organizations and the Need for a Multiple-Constituency Approach*, The Nonprofit Sector: A Research Handbook, edited by Walter W. Powell, New Haven: Yale University Press.

Rotenberg, R. (2004) *Improving Governance in the Developing World: Creating a Measurement and Ranking System*, World Peace Foundation, WPF Reports Number 39, 2004, "The Good Governance Problem: Doing Something about it", pp. 3-9, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University, Cambridge Massachusetts.

Sachs, J. and McArthur, J., Chong-en Bai and Chi-Wa Yuen (editors) (2002) *Technological Advancement and Long-Term Economic Growth in Asia, in Technology and the New Economy*, The MIT Press. Massachusetts Institute of Technology.

Sagie, A., Elizur, D., & Koslowsky, M. (1995). Decision type, participative decision making (PDM) and organizational behavior: An experimental simulation. *Human Performance*, 8, 81-94.

Sagie, A., Koslowsky, M. (1994). Organizational attitudes and behaviors as a function of participation in strategic and tactical change decisions: An application of path-goal theory. *Journal of Organizational Behavior*, 15, 37-47.

Sagie, A., Koslowsky, M. (1998). Extra- and intro-organizational work values and behavior: A multiple-level model. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in organizational behavior* (Vol. 5, pp. 155-176). New York: John Wiley.

Sawhill, J. and Williamson, D. (2001) *Mission Impossible? Measuring Success in Nonprofit Organizations*, Nonprofit Management & Leadership, 11(3), Spring 2001, Jossey-Bass.

Selznick, P. (1957) *Leadership in Administration*, New York: Harper and Row, pp. 28.

Smith, C. S., & Brannick, M. T. (1990). A role and expectancy model of participative decision making: A replication and theoretical extension. *Journal of Organizational Behavior*, 11, 91-104.

Smith, G. (1997). *The new Leader: Bringing Creativity and Innovation to the Workplace*. Delray Beach, Florida: St. Lucie Press.

Snyder, N., Dowd, J., Houghton, D., (1994) *Vision, Values and Courage*, Free Press (Macmillan, Inc.), (pp. 8-12 and 110-112).

Strauss, G. (1990). Worker participation in management: An international perspective. In L. L. Cumming & B. M. Staw (Eds.), *Leadership, participation, and group behavior* (pp. 213-305). Greenwich, CT: JAI.

Thomas, C., Kidd, D. and Fernandez-Araoz, C. (2007) *Are you Underutilizing Your Board?*, MIT Sloan Management Review, Winter 2007, Vol.48 NO.2, pp. 71.

Thomas, K., & Velthouse, B. (1990). Cognitive elements of empowerment: An “interpretive” model of intrinsic task motivation. *Academy of Management Review*, 15, 666-681.

Tichy, N. and McGill, A. (2003) *The ethical challenge: how to lead with unyielding integrity*, Jeffrey Immelt in Chapter 8 “Values”. John Wiley & Sons, Inc., Published by Jossey-Bass.

UNCTAD Series (2001). *Social Responsibility*. New York and Geneva: United Nations.

Wagner, J. A., III., & Gooding, R.. Z. (1987b) Shared influence and organizational behavior: A meta-analysis of situational variables expected to moderate participation outcome relationships. *Academy of Management Journal*, 30, 527-541.

Winterton, J. & Winterton R. (1999). *Developing Managerial Competence*. London and New York: Routledge.

World Bank, (2004) *Overview*, World Development Report, Washington, D.C., pp.11.

Zwerdling, D. (1984). *Workplace democracy: A guide to workplace ownership, participation, and self management experiments in the United States and Europe*. New York: HarperTouch-books.